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5.15 HAZARDOUS MATERIALS HANDLING

This section discusses potential effects from the storage and use of hazardous materials during construction and operation of the Watson Cogeneration Steam and Electric Reliability Project (Project). Design features have been incorporated into the Project regarding the use and storage of hazardous materials to keep potential effects below defined thresholds. Hazardous waste generation and management are discussed in Section 5.14, Waste Management.

The following discussion covers existing conditions; the environmental consequences associated with hazardous materials usage during Project construction and operation; cumulative effects; mitigation measures; and applicable laws, ordinances, regulations, and standards (LORS).

5.15.1 Affected Environment

The Project Site is a 2.5-acre brown field site located within the boundary of the existing Watson Cogeneration Facility, which is a 21.7-acre area within the a 428-acre parcel further described as Assessors Parcel Number (APN) 7315-006-003, 1801 Sepulveda Boulevard, Carson, California, 90745 and is integral to BP's existing Carson Refinery (BP Refinery). The street address of the Project Site is located within the boundary of the existing Watson Cogeneration Facility at 22850 South Wilmington Avenue, Carson, California. Figure 3-1, Regional Map, depicts the Project Site and surrounding area. An existing warehouse/maintenance shop on a portion of the site will be removed as part of the Project. A new warehouse/shop will be constructed at an alternate location on refinery property. The Project Site is located approximately 0.7 mile south of the 405 Freeway, roughly bounded by Wilmington Avenue to the west, East Sepulveda Boulevard to the south, and South Alameda Street to the east.

The Project Site elevation is approximately 32 feet above mean sea level. Because the site is located within the existing refinery property boundary, the Project Site and surrounding areas are highly developed, and have been subject to disturbance for many years.

The Project's primary objective is to provide additional process steam in response to the refinery's process steam demand. The Project complements the existing cogeneration facility located within the confines of the refinery. The existing facility has four GE 7EA combustion turbine generators (CTGs), four heat recovery steam generators (HRSGs), and two steam turbine generators. The Project consists of adding a fifth CTG/HRSG to the existing configuration and is referred to as the "fifth train."

The Construction Laydown and Parking Area is a paved 25-acre parcel located approximately 1 mile southeast of the Project Site, at the northeast corner of East Sepulveda Boulevard and South Alameda Street. The area is owned by BP and is currently used as a truck parking and staging area.

No off-site improvements associated with the Project, such as water supply, natural gas or wastewater pipelines, are currently planned for the Project. The Project will connect to the existing supply pipelines currently located at the facility.

5.15.2 Environmental Consequences

The criteria used to evaluate whether the hazardous materials handling associated with the Project would cause significant effects are taken from the Environmental Checklist Form of the California Environmental Quality Act Guidelines and the standards and thresholds adopted by the agencies with jurisdiction over this Application for Certification. Accordingly, the Project would result in a significant effect if it would do the following:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and as a result, create a significant hazard to the public or environment.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

5.15.2.1 Construction

The hazardous materials to be used during Project construction include gasoline, diesel fuel, oil, and lubricants as well as minimal amounts of cleaners, solvents, adhesives, and paint materials. However, no acutely hazardous materials will be used or stored on-site during construction. A summary of the hazardous materials to be used and stored for construction is provided in Table 5.15-1, Hazardous Materials Usage and Storage During Construction Based on Title 22 Hazardous Characterization, and Table 5.15-2, Hazardous Materials Usage and Storage During Construction Based on Material Properties. These tables identify, respectively, the hazardous materials to be used during construction based on the Title 22 California Code of Regulations (CCR) characteristic criteria and based on the properties of the substances themselves.

Table 5.15-1
Hazardous Materials Usage and Storage During Construction
Based on Title 22 Hazardous Characterization

Material	Hazardous Characteristics ¹	Purpose	Storage Location	Maximum Stored ²	Storage Type
Diesel Fuel	Ignitability	Refueling truck	Laydown Area	4,000 gallons	Truck
Acetylene, Oxygen, Other Welding Gases	Ignitability	Maintenance Welding	Temporary Gas Cylinder Storage Area	400 cubic feet	Cylinders of various volumes
Lead/acid and Alkaline batteries	Corrosivity, Toxicity	Power for Equipment	Laydown Area	50	Unit
Solvents, Adhesives, etc.	Toxicity	Maintenance	Temporary Chemical Storage Area	660 gallons	Drum
Paint	Toxicity	Painting	Temporary Chemical Storage Area	1,000 gallons	Can
Gasoline	Ignitability, Toxicity	Refueling Construction Vehicles and Equipment	Laydown Area	4,000 gallons	Tank

Source: Watson Cogeneration Steam and Electric Reliability Project Team, 2008.

Notes:

¹ Hazardous characteristics identified per Title 22 California Code of Regulations Section 66261.20 *et seq.*, for hazardous wastes.

² All numbers are approximate.

Table 5.12-2
Hazardous Materials Usage and Storage During Construction
Based on Material Properties

Material	Hazardous Characteristics ¹	Purpose	Storage Location	Maximum Stored ²	Storage Type
Lubricating Oil	Mildly Toxic	Lubricating Equipment Parts	Laydown area	1,000 gallons	Tanks

Source: Watson Cogeneration Steam and Electric Reliability Project Team, 2008.

Notes:

¹ Hazardous characteristics based on material properties and potential health hazards provided by those properties.

² All numbers are approximate.

A Hazardous Materials Business Plan (HMBP), which outlines hazardous materials handling, storage, spill response, and reporting procedures will be prepared before the start of construction activities. To comply with the HMBP, construction contractors will be required to ensure that they use, store, and handle these materials in a way that complies with applicable federal, state, and local LORS, including licensing, personnel training, accumulation limits, reporting requirements, and recordkeeping. Each general contractor will also be responsible for maintaining a Material Safety Data Sheet (MSDS) for each chemical used or stored on-site, and construction workers will be made aware of the location and content of the MSDSs.

The Project general contractor will be responsible for providing the services described below for its personnel and any subcontractor personnel. The general contractor will coordinate these services with Watson and ensure that they accord with Watson policies and procedures. The services are listed below.

- Environmental health and safety training.
- Site security.
- Site first aid.
- Construction testing (e.g., nondestructive examination, soil compaction).
- Site fire protection and fire extinguisher maintenance.
- Furnishing and servicing of sanitary facilities.
- Trash collection and disposal.
- Disposal of hazardous materials and waste in accordance with local, state, and federal regulations.

Contractors will be expected to implement Best Management Practices (BMPs) that are consistent with the hazardous materials storage, handling, emergency spill response, and reporting procedures specified in the HMBP. The most probable accidents involving hazardous materials during construction would likely occur from small-scale spills during cleaning or use of other materials in the storage areas or during refueling of equipment. Such materials generally have a low relative risk to human health and the environment. Such spills will be immediately cleaned up, and the materials containing hazardous substances will be properly disposed in accordance with the HMBP and BMPs.

If a large spill were to occur, the spill area would be bermed or controlled as quickly as practical to minimize the footprint of the spill in accordance with the HMBP and BMPs. Contaminated soil materials produced during cleanup of a spill would be stored, transported, and disposed of in accordance with local, state, and federal regulations. If a spill or leak into the environment were to involve hazardous materials equal to or greater than the specific reportable quantity, federal, state, and local reporting requirements would be adhered to. In particular, the Health Hazardous Materials Division of the Los Angeles County Fire Department (LACOFD) would be notified.

The effects associated with the use of hazardous materials during construction will be less than significant as a result of the Watson Cogeneration Company (Applicant) implementing the above procedures and mitigation measures HAZMAT-1 through HAZMAT-4, as discussed in Section 5.15.4, Mitigation Measures.

5.15.2.2 Operation and Maintenance

The hazardous materials to be used or stored on-site during Project operation are listed in Table 5.15-3, Hazardous Materials Usage and Storage During Operation Based on Title 22 Hazardous Characterization, and Table 5.15-4, Hazardous Materials Usage and Storage During Operation Based on Material Properties. These two tables list the materials to be used during regular Project operation that can be characterized as hazardous based on Title 22 CCR criteria and the properties of the materials, respectively.

Table 5.15-3
Hazardous Materials Usage and Storage During Operation
Based on Title 22 Hazardous Characterization

Material	Hazardous Characteristics ¹	Purpose	Storage Location	Maximum Stored	Storage Type
Pipeline Natural Gas	Ignitability	Fuel	Supply piping only	Utility supply on demand	Pipelines
Acetylene, Oxygen, Other Welding Gases	Ignitability	Maintenance Welding	Indoor gas cylinder storage in warehouse	Minimal	Cylinders of various volumes
HRSO Cleaning Chemicals (e.g., HCl, Citric Acid, EDTA Chelant, Sodium Nitrate)	Toxic, Reactive, Corrosive	HRSO Chemical Cleaning	Chemicals are contractor provided.	Multiyear cleaning requirement/ temp storage only	Small original containers

Source: Watson Cogeneration Steam and Electric Reliability Project Team, 2008.

Notes:

¹ Hazardous characteristics identified per Title 22, California Code of Regulations, Section 66261.20 *et seq.*, for hazardous wastes.

EDTA = ethylenediaminetetraacetic acid

HCl = hydrochloric acid

HRSO = heat recovery steam generator

Table 5.15-4
Hazardous Materials Usage and Storage During Operation
Based on Material Properties

Material	Hazardous Characteristics ¹	Purpose	Storage Location	Maximum Stored ²	Storage Type
Mineral Insulating Oil	Mildly Toxic	Electrical Transformers	Outdoor in Transformers	18,000 gallons	Transformers with secondary containment. Substance is not regulated.
Lubricating Oil	Mildly Toxic	Lubricating Equipment Parts	Within Rotating Equipment	4,000 gallons	Within Rotating Equipment
Combustion Turbine Wash Chemicals (specialty detergents and surfactants)	Toxic, Irritants	Combustion Turbine Cleaning	Chemicals are contractor provided and are either not stored on-site or are stored only temporarily in a chemical storage area.	Intermittent use/cleaning by contractor	Small original containers

Source: Watson Cogeneration Steam and Electric Reliability Project Team, 2008.

Notes:

¹ Hazardous characteristics based on material properties and potential health hazards provided by those properties.

² All numbers are approximate.

Fire and Explosion Risks

Flammable materials that will be used during Project operation include natural gas and welding gases. Additionally, other flammable materials that are difficult to ignite will also be used during Project operation: transformer oil and lubricating oil. The risk of a fire or explosion will be minimized through adherence to applicable codes and the implementation of effective safety management practices.

Natural Gas

Existing natural gas systems at the Watson Cogeneration Facility will be used for the Project; no new gas pipelines will be required. Two new gas compressors will be installed at the Project Site to ensure adequate pressure to the CTG. The gas compressors will be housed in an acoustical enclosure and will be cooled with circulating water from Watson Cogeneration Facility.

Natural gas will be continuously delivered to the Project through a pressurized natural gas pipeline and will not be stored on-site.

The risk of a fire or explosion will be minimized through adherence to applicable codes and design features, including isolation valves and the continued implementation of effective safety management practices. With the implementation of standard operating procedures and BMPs based on U.S. Occupational Health and Safety Administration and U.S. Department of Transportation (DOT) regulatory requirements, the use of natural gas will not result in a significant fire or explosion risk.

Welding Gases

The potential effects presented by the use of welding gases at the Project Site do not appear to be significant based on the Project characteristics listed below.

- A limited quantity of each gas will be stored at the Project Site.
- The gases will be stored in DOT-approved safety cylinders that are secured to prevent upset and physical damage.
- Incompatible gases (e.g., flammable gases and oxidizers) will be stored in separate locations.
- The gases will be stored in multiple standard-sized portable cylinders (in contrast to larger cylinders). Generally, the use of these cylinders will limit the quantity of gas released from an individual cylinder failure to less than 200 cubic feet.

Transformer Oil/Lubricating Oil

Transformer oil will not be stored on the Project Site except in the transformers. Nearly the only risk of fire would be the unlikely event of a catastrophic transformer failure. This event would require an emergency response from the BP Carson Refinery fire department or the LACOFD. The potential effects presented by the use of transformer oil at the Project Site do not appear to be significant. Lubricating oil will be used inside rotating equipment. The potential effects presented by the use of lubricating oil at the Project Site does not appear to be significant.

Acutely Hazardous Materials

In September 1996, Senate Bill 1889 was enacted to change the California Health and Safety Code (CHSC), Section 25531 *et seq.*, to replace the Risk Management and Prevention Program requirements with the Risk Management Plan (RMP) requirements established pursuant to Section 112(r) of the federal Clean Air Act (42 United States Code, Section 7412). Pursuant to Senate Bill 1889, the California Office of Emergency Services is required to adopt implementing regulations, initially as emergency regulations, and to seek and maintain delegation of the federal program. The California Accidental Release Prevention (CalARP) Program merges federal and state programs for the prevention of accidental releases of regulated toxic and flammable substances. The goal of the legislation was to eliminate the need for two separate and distinct chemical risk management programs. The CalARP Phase I Final Regulations were approved on 16 November 1998.

The CalARP Program final regulations (Title 19, CCR Division 2, Chapter 4.5) provide two sets of lists of regulated substances: (1) federal-regulated substances and (2) state-regulated substances.

- Section 2770.5, Tables 1 and 2: These two tables list the federal-regulated substances and threshold quantities for accidental release prevention, including flammable substances.
- Section 2770.5, Table 3: This table lists the state-regulated substances and threshold quantities for accidental release prevention.

The Watson Cogeneration Facility currently stores the following substances, as identified on the federal and state lists.

- Ammonia – 147, 917 pounds.
- Butane – 1,015,544 pounds.
- Methane – 3,400,000.
- Flammable gas mixture – 4, 575 pounds.

Incremental increases of ammonia stored on-site will be required as part of Project operation. Anhydrous ammonia is used in the selective catalytic reduction technology to control nitrogen oxide emissions. The ammonia used for this system will be stored in an existing tank at the Watson Cogeneration Facility. The Project will not require additional storage of anhydrous ammonia. The incremental usage of ammonia will be accommodated using the existing truck-unloading facilities. The maximum expected demand for anhydrous ammonia is approximately 290 gallons per day. The number of additional truck deliveries to the Watson Cogeneration Facility will increase by 18 per year to accommodate the Project.

An RMP has already been prepared and implemented to manage and minimize the risks associated with the storage and use of anhydrous ammonia and flammable gases at the Watson Cogeneration Facility. This RMP will be updated as necessary for the Project and will be used during Project operation.

The RMP includes the following programs:

- **Accidental Release Program:** This program addresses ammonia system design features, including containment berms, unloading area mitigations, emergency shutdown procedures, alarms, training, and emergency response plans.
- **Off-site Consequence Analysis:** The purpose of this analysis is to provide information to the public on the potential off-site consequences of an accidental release of CalARP substances.
- **Standard operating procedures:** Written operating procedures provide clear instructions that are consistent with safety requirements for safely conducting activities associated with processes.
- **Maintenance practices and procedures:** These practices and procedures are designed to maintain the ongoing mechanical integrity of the process equipment.
- **External Event Analysis:** This analysis describes the external events that have the potential to cause an accidental release and the safety features that will reduce the potential for and the environmental and health effects of an accidental release of CalARP substances.

Other Hazardous Materials

No adverse environmental effects are anticipated from other hazardous materials that will be used at the Project Site. Only minimal quantities of paints, oils, solvents, and cleaners—quantities typical of those packaged for retail consumer use—are or will be present during Project operation. Small volumes of petroleum products associated with construction equipment will be kept on-site during construction. As described in Section 5.15.2.2, Operation and Maintenance, and Section 5.15.3, Cumulative Effects, long-term and cumulative effects will be avoided by cleaning up any accidental leaks or spills of these materials as soon as they occur. As a result, no adverse environmental effects are anticipated from other hazardous materials used at the Project Site.

Hazardous Materials Business Plan

An HMBP has already been prepared and implemented for the use and storage of hazardous materials at the Watson Cogeneration Facility. This HMBP will be updated as necessary for the Project and will be used during Project operation. An additional HMBP will be required for the Construction Laydown and Parking Area. The Project will implement BMPs that are consistent with the hazardous materials handling, emergency spill response, and reporting procedures specified in the HMBPs.

If a spill or release of hazardous materials were to occur during Project operation, the spill area would be bermed or otherwise controlled as quickly as practical to minimize the footprint of the spill in accordance with the HMBPs and BMPs. Specifically, the procedures listed below would be implemented.

- Contaminated soil materials produced during cleanup of a spill would be stored, transported, and disposed of in accordance with local, state, and federal regulations.

- If a spill or leak into the environment involves hazardous materials equal to or greater than a specific reportable quantity, federal, state, and local reporting requirements would be adhered to.
- In particular, the Health Hazardous Materials Division of LACOFD would be notified. The Emergency Management System would also be notified by calling 911 in the event of a fire or serious injury.

With the implementation of the HMBPs and BMPs, the long-term and cumulative effects associated with spills or releases of hazardous materials would be avoided. Therefore, the effects of hazardous materials handling associated with the Project will be less than significant.

Fire Prevention and Protection

The Project will store and use several combustible materials during both construction and operation (see Tables 5.15-1 through 5.15-4). Fires and explosions are the potential hazards for the Project Site from the storage and use of these materials. The Applicant will implement a variety of prevention and mitigation measures with regard to these potential hazards.

The Fire Prevention and Protection Program covers both fire prevention and fire protection measures. Employment of conservative equipment layouts, segregation of critical components, and the remote location of non-essential resources are the backbone of the fire mitigation and suppression measures included in this program.

A new fire water loop will be installed around the CTG and HRSG and tied into the existing fire protection system. An underground fire water ring header with hydrants will be installed around the periphery of the Project Site, as shown on Figure 3-14, Fire Protection System. The ring header will be manifolded into the existing fire water loop at the Watson Cogeneration Facility at two locations. The fire water system will be designed in accordance with National Fire Protection Association (NFPA) 850 and will provide sufficient flow to meet NFPA codes for fire water demands. No new fire water pumps (diesel or electric) will be required for the Project.

A carbon dioxide (CO₂) fire protection system will protect certain turbine, generator, and accessory equipment compartments from fires. The system will have fire detection sensors in all compartments. The actuation of one sensor will provide a high-temperature alarm on the combustion turbine control panel. The actuation of a second sensor will trip the combustion turbine, turn off ventilation, close ventilation openings, and automatically release the CO₂. The CO₂ will be discharged at a design concentration adequate to extinguish the fire. Portable fire extinguishers will be provided at locations within the Project boundary, as required by NFPA 850.

Fixed fire protection and deluge systems will be provided for the generator step up transformer, the auxiliary transformer, the CTG lube oil system, and the HRSG duct burner skid sprinkler and fixed-spray systems will be designed and installed in accordance with NFPA 13 and NFPA 15.

All fire detection systems associated with the Project will be connected to the existing fire alarm control panel in the control room at the Watson Cogeneration Facility, in accordance with NFPA 72 and local fire codes. The alarm system will include alarm annunciation, supervisory signals, and trouble signals. Alarms will require Project operators to take urgent action. Supervisory signals will indicate abnormal conditions that require investigation. Trouble signals

will indicate adverse conditions such as a ground fault or a power supply problem that should be rectified by qualified personnel.

Hand-held CO₂ and dry chemical fire extinguishers will be located in accordance to NFPA 10.

All material used in Project construction will be free of asbestos and will meet the fire and smoke rating requirements of NFPA 255.

5.15.2.3 Abandonment/Closure

Facility closure will be outlined in the facility's closure plan which will be prepared prior to operation of the facility. Closure of the facility may be temporary or permanent. Temporary closure would be for a period of time greater than the time required for normal maintenance. Reasons for temporary closure would include damage to the plant from earthquake, fire, storm, etc. Permanent closure would end facility operations with no intent to restart operations. The closure plan will outline steps to secure hazardous and non-hazardous materials and wastes. The plan will include monitoring the vessels and receptacles of materials or wastes, safe cessation of processes using hazardous materials or storing hazardous wastes and the inspection of secondary containment structures.

Temporary Closure

The facility's closure plan will outline measures for temporary closure that guarantee that all hazardous materials and waste will be removed from the facility, or that the site will have 24-hour security monitoring. The CEC will be notified prior to closure. Temporary contingency closure measures will be prepared as part of the facility closure plan prior to startup of the facility, and will be developed consistent with BMPs, the HMBP, and the RMP as well as the measures identified in Section 5.15 of the project AFC. The measures will be in accordance with all applicable LORS and will be implemented to protect health and safety and the environment.

Permanent Closure

The planned permanent closure will be incorporated into the facility closure plan and evaluated at the end of the generating station's economic operation. The facility closure plan will outline measures for permanent closure to secure materials and waste, including the inventory, management, and disposal of materials and wastes, and permanent closure of permitted hazardous materials and waste storage units. The permanent closure measures will be prepared as part of the facility closure plan prior to startup of the facility, and will be developed consistent with BMPs, the HMBP, and the RMP as well as the measures identified in Section 5.15 of the project AFC. The measures will be in accordance with all applicable LORS and will be implemented to protect health and safety and the environment.

5.15.3 Cumulative Effects

Given the land uses in the area surrounding the Project Site and the limited incremental increase in the amount of hazardous materials that will be used as part of the Project, no significant cumulative effects are expected to result from hazardous materials handling for the Project in combination with known future projects.

5.15.4 Mitigation Measures

The following mitigation measures will ensure that the Project will use hazardous materials in a way that complies with applicable LORS and does not result in any significant environmental effects.

5.15.4.1 Construction

During Project construction, hazardous materials stored on-site will be limited to fuel (such as diesel), lubricating oils, paint, coatings, adhesives, welding gases, and other cleaners. These materials will be stored in a locked utility shed or a secured, fenced area with secondary containment. It is anticipated that fuels, lubricants, and other fluids needed to operate construction equipment will be transported to the construction site as needed by equipment service trucks. Project construction personnel will be trained in handling hazardous materials and will be alerted to the dangers associated with these materials. An on-site safety officer will be designated to implement health and safety guidelines and to contact emergency response personnel or the local hospital, if necessary.

General contractors for the Project will be required to develop standard operating procedures for servicing and fueling construction equipment. At a minimum, these procedures will include the hazardous material classifications described below.

HAZMAT-1: Fueling and Maintenance

The Applicant or general contractor will implement the following mitigation measures with regard to the fueling and maintenance of construction vehicles and equipment.

- No smoking, open flames, or welding will be allowed in the fueling/services areas.
- Servicing and fueling of vehicles and equipment will occur only in designated areas.
- Fueling service and maintenance will be conducted only by authorized personnel.
- Refueling will be conducted only with approved pumps, hoses, and nozzles.
- All disconnected hoses will be handled in a manner that prevents residual fuel and fluids from being released into the environment.
- Catch-pans will be placed under equipment/hose connections to catch potential spills during fueling and servicing.
- Service trucks will be provided with fire extinguishers and spill containment equipment, such as absorbents, shovels, and containers.
- Service trucks will not remain on the Project Site after fueling and service are complete.

HAZMAT-2: Spills

Spills that occur during vehicle maintenance will be cleaned up immediately. Contaminated soil will be containerized and sent for subsequent evaluation and off-site disposal. A log of all spills and cleanup actions will be maintained.

HAZMAT-3: Emergency Telephone Numbers

Applicant or general contractor will post emergency telephone numbers for the fire department, police, local hospitals, ambulance service(s), and environmental regulatory agencies at the Project Site.

HAZMAT-4: Storage Containers

Containers used to store hazardous materials will be properly labeled and kept in good condition. It is anticipated that these standard operating procedures will minimize the potential for incidents involving hazardous materials during Project construction.

5.15.4.2 Operation and Maintenance

Table 5.15-3, Hazardous Materials Usage and Storage During Operation Based on Title 22 Hazardous Characterization, and Table 5.15-4, Hazardous Materials Usage and Storage During Operation Based on Material Properties, list the hazardous materials anticipated to be used during Project operation. Operation and maintenance mitigation measures are detailed below.

5.15.4.3 Mitigation Measures**HAZMAT-5: Containerized Materials**

Containerized materials will typically consist of returnable tanks (of approximately 100-gallon capacity), 55-gallon drums, or 5-gallon pails of lubricants and oils, and smaller containers of paints and solvents. These materials will be managed as described below to mitigate against potential releases.

- Hazardous materials will be stored in accordance with applicable regulations and codes (i.e., the Uniform Fire Code [UFC]).
- Trucks delivering hazardous materials will be parked adjacent to the usage area or storage area to minimize potential unloading and transportation accidents.
- Incompatible materials will be stored in separate locations.
- Containerized hazardous materials will be stored in their original containers, which are appropriately designed for the individual characteristics of the contained material. Containers will be labeled with their contents and fire hazards will be identified, as required by NFPA 704.
- Containers of flammable materials will be stored in inflammable storage cabinet(s) when not in use.
- Hazardous materials will be stored in structures with secondary containment, which is typically constructed of sealed concrete. These structures will have capacity for the volume of the largest container plus an allowance for rainwater that is equivalent to a 24-hour, 25-year storm event if the area is outdoors. Alternatively, containerized hazardous materials may also be stored in commercially available hazardous materials storage sheds with built-in secondary containment.

- Commercially available secondary containment pallets will be used for containers stored in warehouse facilities to augment the other spill control measures.
- Empty containers, especially portable tanks and drums, will be emptied, drained, and returned to the supplier for reuse to the maximum extent possible or recycled off-site.
- Pollution prevention efforts such as the replacement of hazardous materials with less-hazardous materials, reduction in the volume of hazardous waste generated and recycling will be employed at the Project Site, as practical.

HAZMAT-6: Material Safety Data Sheets

As required by Title 29, Code of Federal Regulations (CFR), Section 1910, Occupational Health and Safety Administration Hazard Communication Rules and Regulations, the Applicant or general contractor will keep MSDS on-site for the hazardous materials used in Project construction and operation.

HAZMAT-7: Personnel Training and Equipment

Personnel working with chemicals will be trained in their proper handling and the procedures for emergency response to chemical spills or accidental releases. This training will be conducted in accordance with the Watson Cogeneration Facility training program.

HAZMAT-8: Hazardous Materials Management – Plans and Procedures

The plans and procedures to address hazardous materials management at the Project Site will be based on the existing requirements and procedures at the Watson Cogeneration Facility for hazardous materials storage, hazardous materials emergency response, hazardous materials employee training, hazard recognition, fire safety, first-aid/emergency medical response, hazardous materials release containment/control procedures, hazard communication training, personal protective equipment training, and release reporting requirements. The existing plans and procedures that will be used for the Project include the HMBP, RMP, Process Safety Management and worker safety program, fire response program, facility safety program, and standard operating procedures. The standard operating procedures will be updated as necessary for the Project. The HMBP and RMP will include procedures on hazardous materials handling, use, and storage; emergency response; spill prevention and control; training; recordkeeping; and reporting and will be updated as necessary for the Project.

HAZMAT-9: Spill Response Procedures

As part of the general spill response procedures for the Project, the Applicant will maintain one or more spill response kits on-site. These kits will contain absorbents appropriate for the hazardous materials kept on-site and each kit will clearly designate the type of spilled material for which it should be used. Typically, these kits contain a barrel, shovel, and absorbents. Also, the Applicant will maintain a supply of gloves and protective clothing for use during spill response events.

If Project personnel discover a spill, they will report to the on-shift Control Room Operator according to the existing emergency response procedures for the Watson Cogeneration Facility.

The Control Room Operator will notify the Operations Superintendent or the Facility Manager. The Superintendent or Manager will function as the On-site Coordinator and will be in charge of activities related to spill containment, control, cleanup, and regulatory agency reporting, if needed.

The On-site Coordinator will assess the situation, contain the leak or spill, begin cleanup operations with on-site staff or off-site contractors, as needed, and collect information for reporting, if necessary. The information that will be needed for reporting is listed below.

- Type of chemical released.
- Amount of release or spill (i.e., volume) and description (liquid, vapor, etc.).
- Location, direction of release, and distance traveled if the release is outside of the secondary containment.
- Cause of spill or release.
- Potential hazard to off-site personnel and local water bodies, including groundwater.
- Actions undertaken to mitigate the spill or release.

The appropriate regulatory authorities will be contacted if required by laws and regulations, or as the On-site Coordinator deems necessary.

In the case of a small spill involving 55 gallons (or less) of liquid hazardous materials, the spill will typically be retained by a secondary containment structure. Properly trained employees will confine this type of spill to as small a space as possible using absorbent pigs or pillows and clean up the spill using absorbents available on-site. Similarly, trained employees will use on-site spill kit equipment to clean up small spills outside of secondary containment structures.

Larger spills will normally be contained within secondary containment and will be cleaned up by outside contractors using trained spill response personnel if on-site employees cannot handle the spill using the on-site spill response equipment.

Waste generated from spill cleanup will be placed in closed, labeled containers (typically, 55-gallon drums or roll-off containers). Labeling will include the name of the Project (Watson Cogeneration Steam and Electric Reliability Project), date of start of accumulation, name of the spilled material, and appropriate hazardous waste identification language from Title 22 CCR Section 66262.32 and the established DOT shipping name, as needed.

The collected waste will be properly disposed of off-site at an approved recycling, landfill, or other appropriate disposal facility. Off-site transportation of spill wastes will be contracted with a licensed hazardous materials and/or waste transportation company, as applicable.

5.15.5 Applicable Laws, Ordinances, Regulations, and Standards

Project construction and operation will be conducted in accordance with all applicable LORS pertaining to hazardous materials. Applicable LORS related to the use and storage of hazardous materials are designed to protect the environment from contamination and Project workers and the surrounding community from exposure to hazardous and acutely hazardous materials.

The applicable LORS related to hazardous materials handling are summarized in Table 5.15-5, Summary of LORS – Hazardous Materials Handling.

Table 5.15-5
Summary of LORS – Hazardous Materials Handling

LORS	Applicability	Administering Agency	Agency Contact	Conformance (AFC Section)
Federal Jurisdiction				
U.S. DOT Regulations, 49 CFR 171-177	Governs the transportation of hazardous materials, including the marking of the transportation vehicles.	DOT Federal Motor Carrier Safety Administration	California Division 916-930-2760	5.15.5.1
State Jurisdiction				
Health and Safety Code Section 25500, <i>et seq.</i> (Waters Bill)	Requires preparation of an HMBP if hazardous materials are handled or stored in excess of TQ.	DTSC	DTSC Duty Officer Chatsworth Office 818-717-6500	5.15.5.2
Health and Safety Code Section 25531, <i>et seq.</i> (La Follette Bill)	Requires registration of the facility with local authorities and preparation of an RMP if hazardous materials stored or handled in excess of TQ.	DTSC	DTSC Duty Officer Chatsworth Office 818-717-6500	5.15.5.2
Title 8 CCR Section 5189	Facility owners are required to implement Safety Management Plans to ensure safe handling of hazardous materials.	DTSC	DTSC Duty Officer Chatsworth Office 818-717-6500	5.15.5.2
California Uniform Building Code	Requirements regarding the storage and handling of hazardous materials.	Los Angeles County Department of Public Works	626-458-5100	5.15.5.2
California Government Code Section 65850.2	Restricts issuance of commercial operating date until the facility has submitted an RMP.	DTSC	DTSC Duty Officer Chatsworth Office 818-717-6500	5.15.5.2
Local Jurisdiction				
LACOFD Health Hazardous Materials Division	Requires new/modified businesses to complete a hazardous materials business before final plan/permit approval.	LACOFD Health Hazardous Materials Division, CUPA	323-890-4045	5.15.5.3

**Table 5.15-5
Summary of LORS – Hazardous Materials Handling**

LORS	Applicability	Administering Agency	Agency Contact	Conformance (AFC Section)
Industry Standards Jurisdiction				
UFC (Articles 79 and 80)	Requirements for secondary containment, monitoring, etc., for extremely hazardous materials.	Los Angeles County Fire Department, Health Hazardous Materials Division	P. Michael Freeman Fire Chief 323-890-4045	5.15.5.4

Source: California Department of Toxic Substances Control, 2008; Cal/EPA, 2008; LACOFD, 2008; Los Angeles County, Department of Public Works, 2008; LACOFD Health Hazardous Materials Division, 2008.

Notes:

AFC	=	Application for Certification
CCR	=	California Code of Regulations
CFR	=	Code of Federal Regulations
CUPA	=	Certified Unified Program Agency
DOT	=	Department of Transportation
DTSC	=	Department of Toxic Substances Control
HMBP	=	Hazardous Materials Business Plan
LACOFD	=	Los Angeles County Fire Department
LORS	=	laws, ordinances, regulations, and standards
RMP	=	Risk Management Plan
TQ	=	Threshold Quantity
U.S.	=	United States
UFC	=	Uniform Fire Code

5.15.5.1 Federal

The Superfund Amendments and Reauthorization Act of 1968 Title III (Sections 302, 304, 311, and 313) and regulations pursuant to the Clean Air Act of 1990 (40 CFR 68) established a nation-wide emergency planning and response program and imposed reporting requirements for businesses that store, handle, or produce significant quantities of extremely hazardous materials. The acts require the states to implement a comprehensive system to inform local agencies and the public when a significant quantity of such materials is stored or handled at a facility (see 40 CFR 68.115). In California, the requirements of these acts are reflected in CHSC Section 25531 *et seq.* The Project will comply with these requirements, as discussed in Section 5.15.5.2, State.

49 CFR Parts 171–177 govern the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.

5.15.5.2 State

CHSC Section 25500 requires companies that handle hazardous materials in sufficient quantities to develop an HMBP. The HMBP provides basic information on the locations, types, quantities, and health risks of the hazardous materials handled, stored, used, or disposed of at a site that could be accidentally released into the environment. The HMBP also includes a plan for training

new personnel and an annual training of all personnel in safety procedures in the event of a release of hazardous materials. In addition, an HMBP includes an emergency response plan and identifies the business representative able to assist emergency personnel in the event of a release.

The existing HMBP for the Watson Cogeneration Facility will be updated before Project construction and operation.

CHSC Section 25531 directs facility owners storing or handling acutely hazardous materials in reportable quantities to develop an RMP and to submit it to appropriate local authorities, the United States Environmental Protection Agency, and the designated local administering agency (LACOFD) for review and approval. The RMP includes an evaluation of the potential effects associated with an accidental release, the likelihood of an accidental release, the magnitude of potential human exposure, any pre-existing evaluations or studies of the hazardous materials in question, the likelihood of the substances being handled in the manner indicated, and the accident history of the materials. This recently developed program supersedes the California Risk Management and Prevention Plan and is known as the CalARP Program. The BP Carson Refinery has prepared and implemented an RMP for the Watson Cogeneration Facility. This RMP will be updated as necessary for the Project.

Title 8 CCR Section 5189 requires facility owners to develop and implement effective Safety Management Plans to ensure that large quantities of hazardous materials are handled safely. Although such requirements primarily provide for the protection of workers, they also indirectly improve public safety and are coordinated with the RMP process.

California Government Code Section 65850.2 states that a city or county shall not issue a final certificate of occupancy for a project unless there is verification that an applicant has met the applicable requirements of CHSC Section 25531 and the requirements, if any, for a permit from the relevant air pollution control district.

The California Uniform Building Code contains requirements regarding the storage and handling of hazardous materials. The Chief Building Official with the Los Angeles (LA) County Building Department must inspect and verify compliance with these requirements before issuance of an occupancy permit.

5.15.5.3 Local

The designated certified unified program agency for the Project Site is the LACOFD Health Hazardous Materials Division, which is responsible for (1) the implementation of the HMBP and emergency response plan, and (2) the storage of hazardous materials in underground storage tanks and cleanup of petroleum releases.

The LACOFD Health Hazardous Materials Division will be contacted in the event of a release of hazardous wastes or materials to the environment.

5.15.5.4 Industry Standards

The UFC contains provisions regarding the storage and handling of hazardous materials. These provisions are contained in Articles 79 and 80. Article 80 was extensively revised in the latest edition (1994). These articles contain requirements that are generally similar to those contained in CHSC Section 25531 *et seq.* However, the UFC contains unique requirements for secondary

containment, monitoring, and treatment of toxic gases emitted through emergency venting. These unique requirements are generally restricted to extremely hazardous materials, which are not being used as part of the Project.

5.15.5.5 Agencies and Agency Contacts

A number of federal and state agencies regulate hazardous materials, including the United States Environmental Protection Agency at the federal level and the California/Environmental Protection Agency at the state level. However, local agencies are the primary enforcers of hazardous materials laws. For the Project Site, the local agency is the LACOFD Health Hazardous Materials Division, as shown in Table 5.15-6, Agency Contact List for LORS.

**Table 5.15-6
Agency Contact List for LORS**

	Agency	Contact	Address	Telephone
1	LACOFD Health Hazardous Materials Division, CUPA	Hazardous Materials Specialist on call	5825 Rickenbacker Road Commerce, CA 90040	323-890-4045
2	LACOFD	P. Michael Freeman Fire Chief	Fire Station #127 2049 East 223 rd Street Carson, CA 90745	323- 881-2411

Source: LACOFD, 2008.

Notes:

CUPA = Los Angeles County Certified Unified Program Agency

LACOFD = Los Angeles County Fire Department

LORS = laws, ordinances, regulations, and standards

5.15.5.6 Permits Required and Permitting Schedule

The Project will update the existing HMBP for the Watson Cogeneration Facility, as required, before the start of construction activities. The Project will also update the RMP, as required, before Project operation. Table 5.15-7, Applicable Permits, provides a list of potential permit requirements.

**Table 5.15-7
Applicable Permits**

Responsible Agency	Permit/Approval	Schedule
Federal agencies	No permits required	N/A
State agencies	No permits required	N/A
LACOFD Health Hazardous Materials Division, CUPA	Hazardous Materials Business Plan	Update Hazardous Materials Business Plan and Prepare an additional Hazardous Materials Business Plan for the Construction Laydown and Parking Area 30 days before storage of hazardous materials on-site from Project

**Table 5.15-7
Applicable Permits**

Responsible Agency	Permit/Approval	Schedule
LACOFD Health Hazardous Materials Division, CUPA	Risk Management Plan	Update Risk Management Plan before operation of the Project

Source: LACOFD Health Hazardous Materials Division, 2008.

Notes:

CUPA = Certified Unified Program Agency
 LACOFD = Los Angeles County Fire Department
 N/A = not applicable

5.15.6 References

California Department of Toxic Substances Control. 2008. Information downloaded from: <http://www.dtsc.ca.gov/>. March.

Cal/EPA (California Environmental Protection Agency). 2008. Website. <http://www.calepa.ca.gov/>.

Cal/EPA (California Environmental Protection Agency), Central Valley Regional Water Quality Control Board. 2008. Information downloaded from: <http://www.waterboards.ca.gov/centralvalley>. March 2008.

LACOFD (Los Angeles County Fire Department). 2008. Information downloaded from: <http://www.fire.lacounty.gov/default.asp>.

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Lees, F.P. 1983. *Loss Prevention in the Process Industries*. Vols. I and II. Butterworths.

Lewis, R.J., Sr. 1992. *Sax's Dangerous Properties of Industrial Materials*. 8th ed. New York: Van Nostrand Reinhold.

Los Angeles County Department of Public Works. 2008. Information downloaded from: <http://ladpw.org/>. June.

NFPA (National Fire Protection Association). 1994. *A Compilation of NFPA Codes, Standards, Recommended Practices and Guides*. Quincy, Massachusetts.

NIOSH (National Institute of Occupational Safety and Health). 1997. *NIOSH Pocket Guide to Chemical Hazards*. DHHS Publication No. 97-140. Washington, D.C.: U.S. Government Printing Office.

Watson Cogeneration Steam and Electric Reliability Project Team. 2008. Fieldwork, observations, and research.

Adequacy Issue: _____ Technical Area: _____ Project Manager: _____	Adequate Inadequate Hazardous Materials Handling _____ _____ _____	DATA ADEQUACY WORKSHEET Watson Cogeneration Steam and Electric Reliability Project _____ _____ _____	Revision No. 0 Date _____ Technical Staff: _____ Technical Senior: _____
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SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (e) (1)	A discussion of how facility closure will be accomplished in the event of premature or unexpected cessation of operations.	Section 5.15.2.3; page 5.15-10		
Appendix B (g) (1)	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	Section 5.15.1; page 5.15-1 Section 5.15.2; pages 5.15-2 through 5.15-10 Section 5.15.3; page 5.15-10 Section 5.15.4; page 5.15-11		
Appendix B (g) (10) (A)	A list of all materials used or stored on-site which are hazardous or acutely hazardous, as defined in Title 22, California Code of Regulations, Section 66261.20 <i>et seq.</i> , and a discussion of the toxicity of each material.	Section 5.15.1; page 5.15-1 Section 5.15.2.1, Table 5.15-1; page 5.15-3 Section 5.15.2.1, Table 5.15-2; page 5.15-3		
Appendix B (g) (10) (B)	A map at a scale of 1:24,000 depicting the location of schools, hospitals, day-care facilities, emergency response facilities and long-term health care facilities, within the area potentially affected by any release of hazardous materials.	Figure O-1 in AFC Appendix O, Public Health		
Appendix B (g) (10) (C)	A discussion of the storage and handling system for each hazardous material used or stored at the site.	Section 5.15.2; pages 5.15-2 through 5.15-10 Section 5.15.2.1, Table 5.15-1; page 5.15-3 Section 5.15.2.1, Table 5.15-2; page 5.15-3		

Adequacy Issue:	Adequate	Inadequate	Revision No. 0	Date
Technical Area:	Hazardous Materials Handling		Watson Cogeneration Steam and Electric Reliability Project	
Project Manager:	Project:		Technical Staff:	
	Docket:		Technical Senior:	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (g) (10) (D)	The protocol that will be used in modeling potential consequences of accidental releases that could result in off-site impacts. Identify the model(s) to be used, a description of all input assumptions, including meteorological conditions. The results of the modeling analysis can be submitted after the AFC is complete.	Section 5.15.2.2; pages 5.15-4 through 5.15-10		
Appendix B (g) (10) (E)	A discussion of whether a risk management plan (Health and Safety Code Section 25531 <i>et seq.</i>) will be required, and if so, the requirements that will likely be incorporated into the plan.	Section 5.15.2.2; pages 5.15-4 through 5.15-10		
Appendix B (g) (10) (F)	A discussion of measures proposed to reduce the risk of any release of hazardous materials.	Section 5.15.2; pages 5.15-2 through 5.15-10 Section 5.15.4; page 5.15-11		
Appendix B (g) (10) (G)	A discussion of the fire and explosion risks associated with the project.	Section 5.15.2.2; pages 5.15-4 through 5.15-10		
Appendix B (i) (1) (A)	Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and	Section 5.15.5; pages 5.15-14 through 5.15-19 Section 5.15.5.5, Table 5.15-5; pages 5.15-15 through 5.15-16		

Adequacy Issue:	Adequate	Inadequate	Revision No. 0	Date
Technical Area:	Hazardous Materials Handling		Watson Cogeneration Steam and Electric Reliability Project	
Project Manager:	Docket:		Technical Staff:	
			Technical Senior:	

SITING REGULATIONS	INFORMATION	AFC PAGE NUMBER AND SECTION NUMBER	ADEQUATE YES OR NO	INFORMATION REQUIRED TO MAKE AFC CONFORM WITH REGULATIONS
Appendix B (i) (1) (B)	Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.	Section 5.15.6; page 5.15-19 Section 5.15.5, Table 5.15-5; pages 5.15-15 through 5.15-16 Section 5.15.5.5, Table 5.15-6; page 5.15-18 Section 5.15.5.6, Table 5.15-7; pages 5.15-18 through 5.15-19		
Appendix B (i) (2)	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.	Section 5.15.5, Table 5.15-5; pages 5.15-15 through 5.15-16		
Appendix B (i) (3)	A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.	Section 5.15.5.6, Table 5.15-7; pages 5.15-18 through 5.15-19		

